

HEAT TRANSFER PROBE

Abstract of the Disclosure

Apparatuses, systems, methods, and computer code for, among other things,
5 monitoring the health of samples such as the brain while providing local cooling or
heating. A representative device is a heat transfer probe, which includes an inner channel,
a tip, a concentric outer channel, a first temperature sensor, and a second temperature
sensor. The inner channel is configured to transport working fluid from an inner inlet to
an inner outlet. The tip is configured to receive at least a portion of the working fluid
10 from the inner outlet. The concentric outer channel is configured to transport the
working fluid from the inner outlet to an outer outlet. The first temperature sensor is
coupled to the tip, and the second temperature sensor spaced apart from the first
temperature sensor.